

CLAIMS

1. Adhesive composition, characterized in that it comprises an aqueous dispersion having a primary part, composed essentially of a gelatinized starch, and a secondary part, essentially comprising a nongelatinized starch and/or a swollen starch, in which:
- the starch of the primary part comprises a starch selected from the group consisting of native and modified legume starches, native and modified cereal starches and native and modified tuber starches, alone or as a mixture with one another, and,
  - when the starch of the primary part comprises a legume starch, the starch of the secondary part is then selected from the group consisting of native legume starches, native and modified cereal starches and native and modified tuber starches having an amylose content of less than 30%, alone or as a mixture with one another, and,
  - when the starch of the primary part is a native or modified cereal or tuber starch, the starch of the secondary part comprises at least one native legume starch,
- said legume starches furthermore exhibiting a purity of greater than 90%, preferably of greater than 95% and more preferably still of greater than 98%, as well as colloidal matter and/or fibrous residue contents of less than 1% (dry/dry), and protein contents of less than 1% (dry/dry), and an amylose content of between 30 and 52% (dry/dry).
2. Adhesive composition, characterized in that it comprises an aqueous dispersion having a primary part, composed essentially of a gelatinized starch, and a secondary part, essentially comprising a nongelatinized starch and/or a swollen starch, in which:
- the starch of the secondary part is a native legume starch, and

- the starch of the primary part is optionally a native or modified legume starch, said starches exhibiting a high purity, of greater than 90%, preferably of greater than 95%, more  
5 advantageously still of greater than 98%, as well as low contents, for example and respectively of less than 1% (dry/dry) of colloidal matter and of fibrous residues and of less than 1% of proteins, and an amylose content of between 30 and 52%.

10

3. Adhesive composition according to Claim 1 or 2, characterized in that the amylose content of the legume starch or starches is between 30.5 and 45%, preferably greater than 31% and less than 40%, in particular  
15 between 31.5 and 39.5% (dry/dry).

4. Adhesive composition according to any one of Claims 1 to 3, characterized in that it comprises between 10 and 40% by weight of legume starch, with  
20 respect to the whole of said composition.

5. Adhesive composition according to any one of Claims 1 to 4, characterized in that it comprises between 0.3 to 5% by weight of an alkaline substance,  
25 with respect to the whole of said composition.

6. Adhesive composition according to any one of Claims 1 to 5, characterized in that it comprises between 0.01 to 5% by weight, with respect to the total  
30 starch, of borax or of any other boron-carrying chemical compound.

7. Adhesive composition according to any one of Claims 1 to 6, characterized in that it exhibits a  
35 solids content of greater than approximately 26%, preferably equal to or greater than 28%.

8. Adhesive composition according to any one of Claims 1 to 7, characterized in that it comprises an

effective amount of a chemical agent selected from sulphates, in particular zinc sulphate, alumin sulphate or copper sulphate, zirconium-carrying compounds or diammonium phosphate.

5

9. Adhesive composition according to Claim 8, characterized in that it exhibits a solids content of greater than approximately 20%, preferably equal to or greater than 22%.

10

10. Adhesive composition according to Claim 9, characterized in that it exhibits a solids content of greater than approximately 24%, preferably equal to or greater than 26%.

15

11. Adhesive composition according to any one of Claims 1 to 10, characterized in that it comprises an effective amount of a resin selected from the group consisting of formaldehyde resins and of formaldehyde-free synthetic resins.

20

12. Process for the preparation of corrugated fibre-board, characterized in that it comprises, at least once, the following steps:

- 25 - application, to the tips of the flutes of a preshaped paper strip, of an adhesive composition according to any one of Claims 1 to 11,  
- application of a flat paper or of a flat fibre-board to the flute tips thus coated with the  
30 adhesive composition,  
- drying.

30

13. Corrugated fibreboard, comprising an adhesive composition according to Claims 1 to 11.

35

14. Corrugated fibreboard according to Claim 13, characterized in that it exhibits a resistance to water according to the criteria defined by the FEFCO No. 9 test.

15. Corrugated fibreboard according to either of  
Claims 13 and 14, characterized in that it is selected  
from the group consisting of "single face", "single  
5 wall" or "triple wall" fibreboard, "heavy" fibreboard,  
fibreboard exhibiting a number of flutes of greater  
than 3, and/or microflutes.